

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1 – 16. (Canceled).

17. (Currently Amended) A flexible tube for an endoscope, comprising:

an elongated tubular core body; and

an outer cover which is provided over the core body, the outer cover having a portion which is formed into a laminate structure composed of at least three layers, wherein at least one of the layers constituting the portion of the laminate structure has a thickness-varying region where the thickness of the layer varies in its longitudinal direction,

wherein the thickness-varying region extends substantially over an entire region of the layer, and within the thickness-varying region the thickness of the layer varies in its longitudinal direction in a stepwise manner.

18. (Canceled)

19. (Previously Presented) The flexible tube as claimed in Claim 17, wherein the layer with the thickness-varying region has at least one uniform thickness region which is formed so as to adjoin the thickness-varying region.

20. (Previously Presented) The flexible tube as claimed in Claim 17, wherein the layer having the thickness-varying region is formed of a material that is different from

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materials constituting the other layers in its hardness.

21. (Previously Presented) The flexible tube as claimed in Claim 17, wherein each of at least two of the layers constituting the portion of the laminate structure has a thickness-varying region where the thickness of the layer varies in its longitudinal direction.

22. (Previously Presented) The flexible tube as claimed in Claim 17, wherein the outer cover is provided over the core body through an extrusion molding process.

23. (Previously Presented) The flexible tube as claimed in Claim 22, wherein in the extrusion molding process a constituent material for each of the layers is fed at a predetermined feeding rate while the core body is fed at a predetermined feeding speed, in which the thickness of the layer having the thickness-varying region is controlled by adjusting the feeding rate of the material for the layer during the extrusion molding process and/or adjusting the feeding speed of the core body during the extrusion molding process.

24. (Currently Amended) A flexible tube for an endoscope, comprising:  
an elongated tubular core body; and  
an outer cover which is provided over the core body, the outer cover having a portion which is formed into a laminate structure composed of at least three layers, wherein at least one of the layers constituting the portion of the laminate structure has at least two regions and at least one boundary part along its longitudinal direction, and one of the regions is contiguous to the other region through the boundary part, in which

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one of the regions is different from the other regions adjacent thereto in its physical property and/or chemical property,

wherein the boundary part is formed as a property-varying part within which the physical property and/or the chemical property of the layer gradually vary in its longitudinal direction.

25. (Previously Presented) The flexible tube as claimed in Claim 24, wherein one of the regions is formed of a material which is different from that forming the other region adjacent thereto.

26. (Previously Presented) The flexible tube as claimed in Claim 24, wherein each of at least two of the layers constituting the portion of the laminate structure has at least two regions and at least one boundary part along its longitudinal direction, and one of the regions is contiguous to the other region through the boundary part, in which one of the regions is different from the other region adjacent thereto in its physical property and/or chemical property.

27. (Previously Presented) The flexible tube as claimed in Claim 26, wherein the outer cover is formed such that the boundary part of one layer is not located above or below the boundary part of the other layer in its thickness direction.

28. (Canceled)

29. (Currently Amended) The flexible tube as claimed in ~~Claim 28~~ Claim 24, wherein the boundary part is formed of a mixture of a material constituting one of the regions and a material constituting the other region.

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30. (Currently Amended) ~~The flexible tube as claimed in Claim 24~~ A flexible tube for an endoscope, comprising:

an elongated tubular core body; and

an outer cover which is provided over the core body, the outer cover having a portion which is formed into a laminate structure composed of at least three layers, wherein at least one of the layers constituting the portion of the laminate structure has at least two regions and at least one boundary part along its longitudinal direction, and one of the regions is contiguous to the other region through the boundary part, in which one of the regions is different from the other regions adjacent thereto in its physical property and/or chemical property,

wherein the layer having the boundary part is formed such that the physical property and/or the chemical property within the boundary part vary in its longitudinal direction in a substantially stepwise manner.

31. (Previously Presented) The flexible tube as claimed in Claim 24, wherein in the layer having the at least two regions, one of the regions is different from the other region adjacent thereto in its hardness.

32. (Previously Presented) The flexible tube as claimed in Claim 24, wherein the flexible tube has tip and base ends, and flexibility of the flexible tube increases in a gradual or stepwise manner along the direction from the base end to the tip end.

33. (Previously Presented) The flexible tube as claimed in Claim 24, wherein the layers of the laminate structure include an inner layer, an outer layer and at least one

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intermediate layer formed between the inner layer and the outer layer, and wherein the intermediate layer of the outer cover has a higher elasticity than the inner and outer layers so that the intermediate layer functions as cushioning between the inner layer and the outer layer.

34. (Currently Amended) The flexible tube as claimed in Claim 24 30, wherein the layers of the laminate structure include an inner layer, an outer layer and at least one intermediate layer formed between the inner layer and the outer layer, and wherein the intermediate layer of the outer cover has a higher elasticity than the inner and outer layers so that the intermediate layer functions as cushioning between the inner layer and the outer layer.

35. (Previously Presented) The flexible tube as claimed in Claim 24, wherein at least one of the layers constituting the portion of the laminate structure has a thickness-varying region where the thickness of the layer varies in its longitudinal direction.

36. (New) The flexible tube as claimed in Claim 17, wherein the thickness-varying region varies in thickness in four steps along its longitudinal direction.

37. (New) The flexible tube as claimed in Claim 17, wherein the layer having the thickness-varying region comprises:

a thinnest region extending through a first quarter of the layer, which is provided toward an end tip thereof; and

a thickest region extending through a fourth quarter of the layer, which is

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provided toward a base end thereof.

38. (New) The flexible tube as claimed in Claim 37, wherein a thickness ratio of the thinnest region over the thickest region is 0.125.

39. (New) The flexible tube as claimed in Claim 37, wherein the thinnest region is 0.05 mm in thickness, and the thickest region is 0.4 mm in thickness.

40. (New) The flexible tube as claimed in Claim 17, wherein an intermediate layer varies in thickness in four steps along its longitudinal direction.

41. (New) The flexible tube as claimed in Claim 17, wherein the intermediate layer comprises:

a thickest region extending through a first quarter of the layer, which is provided toward an end tip thereof; and

a thinnest region extending through a fourth quarter of the layer, which is provided toward a base end thereof.

42. (New) The flexible tube as claimed in Claim 41, wherein a thickness ratio of the thinnest region over the thickest region is 0.125.

43. (New) The flexible tube as claimed in Claim 41, wherein the thinnest region is 0.05 mm in thickness, and the thickest region is 0.4 mm in thickness.